# **Project Dissertation Report on**

# MULTIFACET ANALYSIS OF INDIAN EDTECH SECTOR

Submitted by

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### CERTIFICATE FROM THE INSTITUTE

This is to certify that the Project Report titled, MULTIFACET ANALYSIS OF INDIAN EDTECH SECTOR is a bonafide work carried out by

Mr. Vidhu Vasav Singh Gill of MBA 2019-21 and submitted to Delhi School of Management, Delhi Technological University, Bawana Road, Delhi-42 in partial fulfilment of the requirement for the award of the Degree of Master of Business Administration.

Signature of the Guide:

Date: May 08, 2021.

Place: Delhi School of Management, DTU.

Signature of the head:

## **DECLARATION**

This is to certify that I have completed the project titled MULTIFACET ANALYSIS OF INDIAN EDTECH SECTOR. This work was done under the supervision and guidance of Dr. P.K Suri in the partial fulfilment of the requirement for the award of the degree of "Master's in Business Administration" from "Delhi School of Management, Delhi Technological University." It is also certified that the project of mine is an original work and the same has not been submitted earlier elsewhere.

Vidhu Vasav Singh Gill- 2K19/DMBA/109

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#### **EXECUTIVE SUMMARY**

Technology in education (Ed Tech) is changing rapidly. But many sectors of the economy have become more digital without significant restructuring in how the market is organized or what outcomes the sector achieves. Separating hype from substance is critical some basic economic principles help us do that. A key idea of this article is that in education, technology changes like digitization are likely to be disruptive when they change the "product" and are unlikely to be if they don't. By changing the product, I mean change in how education itself is structured. Digitization without product change is often more about distribution through a new channel.

My focus is on the higher end, currently rather expensive-to-Tech. Perhaps the simplest example is synchronous develop areas of Ed delivery of five content with two-way interactivity (e.g., an online case discussion in a business school). Many of these developments are helping us rethink how best to students learn. In contrast, this article is not principally concerned support how with Massive Open Online Courses (MOOCs). MOOCs are important for democratizing certain elements of education—that is, they currently represent a different distribution channel—and for sorting individuals into different educational pathways—for example, by identifying talent.

But they are not in themselves significant changes in the education product. This helps explain the market's transition from infatuation with MOOCs just a few years ago to the more realistic expectations of them currently. Ed Tech is already changing the education product. Therein lies its dis-ruptive potential. The eight productchange examples outlined above are all at varying degrees of execution, and all have plenty of room for further development. Together, they point to a dynamic that isunmistakably different than any in education during our lifetimes. For example, when learning engines allow a tenth grader to feed in an essay draft and instant, substantive feedback on the depth of the thesis intellectual coherence of paragraphs, and the degree to which the essay is compelling, we will all be learning ng to write in radically different way. We are not there yet. But in ten years?

The learning networks that will result from this trans ition to a more durable form of information good will shape education's future, including putting economic pressure on institutions that are dependent on local geography. Technology plays a very important role in the ed tech sector. The ed tech sector has evolved from the basics to augmentation of reality. This research paper gives emphasis on the multi-facet analysis of the ed tech sector including the Product analysis and Comparative research, Customer need analysis as well as the perception analysis. The paper also makes use of ANOVA and Regression Model to study the inter-relatedness of factors that govern the ed tech sector. The important conclusions drawn in the research include the need of a learning app for teachers in order to ease the workload as well as to set up the price, content of curriculum and teaching methodology in life with customer expectations as expressed in their responses to increase profitability.

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#### **INTRODUCTION**

### "Engaging and Empowering Learning Through Technology"

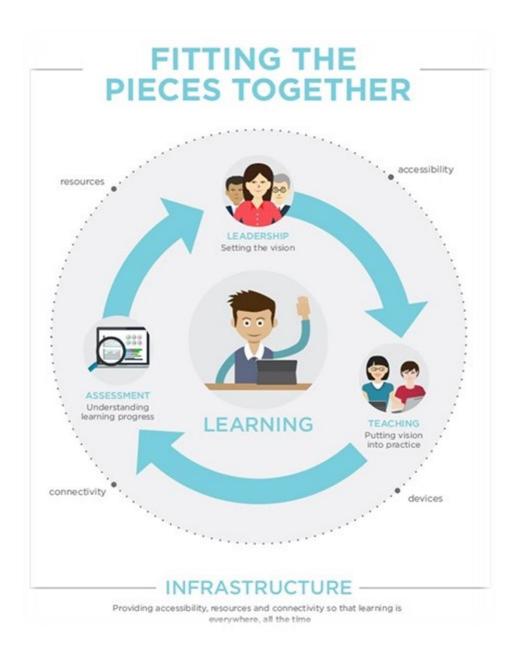
To be successful in our daily lives and in a global workforce, Students need pathways to acquire expertise and form meaningful connections to peers and mentors. This journey begins with a base of knowledge and abilities that can be augmented and enhanced throughout our lives. Fortunately, advances in learning sciences have provided new insights into how people learn. Technology can be a powerful tool to reimagine learning experiences on the basis of those insights. Historically, a learner's educational opportunities have been limited by the resources found within the walls of a school. Technology-enabled learning allows learners to tap resources and expertise anywhere in the world, starting with their own communities. For example:

- With high-speed internet access, a student interested in learning computer science can take the course online in a school that lacks the budget or a faculty member with the appropriate skills to teach the course.
- Learners struggling with planning for college and careers can access high-quality online mentoring and advising programs where resources or geography present challenges to obtaining sufficient face-to-face mentoring.
- With mobile data collection tools and online collaboration platforms, students in a remote geographic area studying local phenomena can collaborate with peers doing similar work anywhere in the world.
- A school with connectivity but without robust science facilities can offer its students virtual chemistry, biology, anatomy, and physics labs—offering students learning experiences that approach those of peers with better resources.
- Students engaged in creative writing, music, or media production can publish their work to a broad global audience regardless of where they go to school.
- Technology-enabled learning environments allow less experienced learners to access and participate in specialized communities of practice, graduating to more complex activities and deeper participation as they gain the experience needed to become expert members of the community.

These opportunities expand growth possibilities for all students while affording historically disadvantaged students' greater equity of access to high-quality learning materials, expertise, personalized learning, and tools for planning for future education. Such opportunities also can support increased capacity for educators to create blended learning opportunities for their students, rethinking when, where, and how students completely different components of a learning experience.

Innovation and educational technology are primarily concerned with making use of modern and scientific teaching-learning methods and instructional strategies in the system of education. In the present existence, the use of technologies has acquired prominence. The instructors and students are making use of internet on a comprehensive scale to generate information in terms of various aspects and augment their understanding. In addition, they are making of computers to prepare their assignments and projects. The individuals are able to become well-equipped with technologies with thorough practice. Apart from technologies the other innovative methods used in the teaching-learning processes are, charts, maps, models, textbooks, and other reading materials.

Through making use of these technologies and materials, instructors are putting into operation various kinds of instructional strategies that are necessary to augment student learning. The different kinds of instructional strategies include, giving Power Point presentations, reading and providing explanations, providing explanations through making use of charts, models and maps and so forth. Innovation and educational technology can help in bringing about transformations in instructional strategies.



#### BACKGROUND

Increasing penetration of internet in many regions across the globe is a major factor driving the market growth. Growing adoption of cloud-based solutions coupled with huge investments by major market players towards enhancing the security and reliability of cloud-based education platforms, is further increasing its adoption among the end-users. Presence of a large number of service and content providers in the market is bringing huge volumes of educational content online. The global online education market is projected to witness a CAGR of 9.23% during the forecast period to reach a total market size of US\$319.167 billion in 2025, increasing from US\$187.877 billion in 2019. Increasing penetration of internet in many regions across the

globe is a major factor driving the market growth. Declining hosting cost and growing need for accessing educational content is further fueling the adoption of this technology, thus augmenting the market growth. Advancements in the field of artificial intelligence and rapid growth of Internet of Things (IoT) will continue to enhance the user experience on these online education platforms, which is anticipated to spur the market growth throughout the forecast period. Increased effectiveness of animated learning along with flexibility in learning are some other factors contributing to the growth of online education by academic institutions. Lack of competent staff in various schools and colleges across the developing nations is also resulting in the adoption of online education by the students. Support and funds from the governments is another major driver for the growth of the industry. By type, the global online education market is segmented as online education by academic institutions and by corporate sector. With the increasing number of students in academic institutions and regular need to up skill and provide industry relevant training to the staff, the academic institutions as well as corporate need to come up with the options that allow individuals to learn anytime from anywhere. With the increasing number of the students and the cost effectiveness of online education many educational institutes are integrating face-to-face learning with online learning at all levels of education. For instance, Berkeley University of California recently partnered with edX to offer Data 8 course online for no cost which was earlier limited to the few who got admissions in the institute.

Colleges and universities across the globe are frequently providing new MOOCs as well as distance learning courses. An upsurge in tuition fees and high interest on education loans in both developed and developing countries has raised the cost of getting campus education which is continuously shifting the trend towards online learning solutions, thus, positively impacting the demand for LMS across this universities and colleges. Online education industry will be a \$1.96 billion industry by 2021 according to a research conducted by KPMG, along with insights from Google search. The report finds that the paid user base will grow 6X from 1.6 million users in 2016 to 9.6 million users

There are five major categories of education with potential for significant online adoption. Reskilling and online certification courses currently accounts for a significant part of the online education market in India with a share of 38%. This is largely driven by a healthy adoption rate amongst the significant population of IT professionals in India. However, with an estimated ~280 million students expected to be enrolled in schools by 2021 and increasing adoption amongst this target audience, online primary and secondary supplemental

is expected to be the dominant category of courses with a 39% market share in 2021. At the same time, online test preparation is expected to be the fastest growing category of online education, estimated to grow at an impressive CAGR of 64% in the next five years.

#### Well Known Players in India

India suffers from skewed pupil-to-teacher ratio, which is rising and it compromises a complete learning experience for <u>students</u> in schools. And hence, these technology driven learning apps are using gaming elements, such as point-scoring and interaction with others, personalization, and data driven insights to help boost the learning process for students and sharpen their basics in various subjects. They are revolutionizing the learning process and helping students in many ways to perform better in classrooms.

EdTech start-ups are emerging as a major <u>business</u> industry in India. The education sector in India is estimated at US\$ 91.7 billion in FY18 and is expected to reach \$101.1 Billion in FY19. Let's see some of the start-ups in Education sector in India which are gradually emerging and changing the world regarding education scene in India. Below is the list of best EdTech start-ups in India.

List of Ed - Tech Companies of India

- Byju's
- Toppr
- Vedantu
- Meritnation
- Unacademy
- UpGrade



#### OBJECTIVE OF THE STUDY

When we talk about technology in education, we recall the utility of technologies like audio-visual aids, machines, and equipment such as TV, overhead projector, computers for education, etc. Technology is that element of development which is almost found in every part of our culture, affecting how we live, play, work and learn. With technological advancement in the world through the invention of mobile and wireless devices, it has become really important for the education sector to get a hold of this technology in the teaching-learning process.

This report will help get familiar with the list of essential objectives of educational technology. The objectives of this research are as follows:

- To analyze the existing trends of ed tech sector in India.
- 2. To perform the comparative product analysis using secondary market research techniques.
- To conduct primary research to understand the student perception of the existing ed tech sector in India.
- To conduct customer need analysis for the Teacher-Learning app.

#### SCOPE OF THE STUDY

The objectives of educational technology are process-oriented. The use of educational technology is not restricted to teaching and learning methodologies and theories, but to provide in-depth assistance in the development of an individual's personality. Below is a list on the wide scope of education technology:

- Educational technology makes the teaching-learning process more efficient and process oriented.
- Mechanical and electronic gadgets can be readily utilized for educational requirements.
- Educational technology has improved the learning process for students with the help of teaching aids and programmed instructional material, etc.
- Traditional mediums like television, radio, tape-recorder, V.C.R, and computers
  can be used to impart distance and correspondence education.
- The advancement of the internet has increased education dissemination all over the world with much ease.
- Mechanism of feedback through the use of technology improves the quality of teachers training in academic institutions.
- Technology-driven innovative analytical tools and instruments can help in solving educational administrative problems.
- Educational technology serves to develop and understand the structure and nature of teaching.
- Best utilization of education technology supports the scientific foundation and new discoveries.

#### LITERATURE REVIEW

Technology can reduce the tremendous effort given by students to gather number of printed book and journals for acquiring knowledge and increase students' focus on more important knowledge gathering process. Equally important, technology can represent education in ways that help students understand latest concepts and ideas. The Education Technology also enables teachers to integrate project based learning. With guidance from effective teachers, students at different levels canuse these tools to construct knowledge and develop skills required in modern society such as presentation skills and analytical skills.

In the present time the teacher's role in teaching is facilitator. The teacher has to facilitate the learning by providing students with access to technology. The teachers can find the means to engage students more easily in learning and to cater to the various needs of different students.

#### What is Education technology?

Technology in education is defined as an array of tools that helpful in advancing student learning and measured in how and why individuals behave. Educational technology is the study and ethical practice of facilitating e-learning, which is the learning and improving performance by creating, using and managing appropriate technological processes and resources. [2] Educational Technology relies on a broad definition of the word "technology" which significant the tools and the sources toenhanced, to develop the skill of the Education.

#### History of Use of Technology in Education

Educational technology could be traced back to the emergence of very early tools, e.g., paintings on cave walls. But usually its history starts with the introduction of educational films (1900s) or Sidney Presser's mechanical teaching machines in the 1920s.

The first large scale usage of new technologies can be traced to US WWII training of soldiers through training films and other mediated materials. Today, presentation-based technology, based on the idea that people can learn through aural and visual reception, exists in many forms, e.g., streaming audio and video, or PowerPoint presentations

In the 1990s, there are a variety of schools that have Computer-based learning (CBL) system. They are frequently based on constructivist and learning theories, these environments focused on teaching both abstract and domain-specific problem solving learning.

The 2000s emergence of multiple media and ubiquitous technologies which gave a new impulse to situated learning theories favoring learning-in-context scenarios. Students are now growing up in a digital age were they have constant exposure to a variety of —media.

#### Why technology is used in Education Industry?

Economists identify three factors that lead to growth which is based on increased human capacity.

- **Capital deepening** the ability of the workforce to use equipment that is more productive than earlier versions
- **Higher quality labor** a more knowledgeable work force that is able to add value to economic output
- Technological innovation the ability of the workforce to create, distribute, share and use of the new knowledge.

  These three productivity factors serve as the basis for three complementary, somewhat overlapping, approaches that connect education policy with economic development.
- The Technology literacy approach -Increasing the extent to which new technology is used by students, citizens and the workforce by incorporating technology skills into the school curriculum.
- The Knowledge deepening approach -Increasing the ability of students, citizens, and the workforce to use knowledge to add value to society and the economy by applying it to solve complex, real-world problems.
- The Knowledge Creation approach -Increasing the ability of students, citizens, and the workforce to innovate, produce new knowledge, and benefit from this new knowledge.

Our aim was to encourage far higher levels of active student engagement, were knowledge is obtained by sharing, problem-solving and creating, rather than by passive listening. This classroom enables both active engagement and equal access" by lead researcher, LizBurdon Britain's Durham University (2012).

None of the changes highlighted so far will occur of their own accord. Indeed, 2020s will see the expansion of the 'ecosystem' that already exerts considerable influence on what takes place in the of educational technology. School systems will continue to be subject to major pushes for privatization of the digital infrastructures. The global digital education agenda will con-tenue to be influenced by big corporate 'Edubusinesses' such as Pearson alongside wealthy phalanx- tropics such the Chan Zuckerberg Initiative Alongside these established corporate behemoths, the most profitable EdTech businesses will most likely emerge from 'new' markets such as China and India. These actors will be accompanied by portfolios of 'start-up' companies (often financed by powerful venture capital interests) pushing educational 'innovations' and 'solutions'. Critical researchers therefore need to to how corporate actors that are shaping educational technol- fogy agendas around the

While there nothing inherently wrong (or especially new) with these commercial contributions, questions need to be asked about regulation and oversight of corporate activities in educational settings. Forexample, should major 'big tech' corporations continue to exercise 'soft power' in immune- king and shaping education decision-making, while all the time profiting from the decisions being made?

How might we better ensure that commercial actors respond primarily to the ideals of public education rather than working to create demand for their products?

How can educators be supported in maintaining their role in guiding and leading the development of our youngest members of society? What counter- narratives can be developed against the prevalent forms of high-tech Behavoyeurism that companies are promoting through the development of data-driven personalized learn in systems? Critical EdTech research has a key role to play in supporting educational communities to confront the challenge of preserving the past while adapting to the future.

#### Emerging Trends in ED-Tech sector:

Dependable economic principles can help us think about how

Tech will play out. There are two principles in particular that non-economists are less familiar with that deserve note: information goods and network economics.

Traditional education can be described as an information good, but a non-durable one, in that the good itself-the lecture, for example-does not last beyond the delivery. While it is true that the event of its student's notes of the lecture persist, they are in fact a poor facsimile of itself. (Note that secondary market for your old lecture notes is not exactly vibrant.) Of course, hopefully the impact of the lecture lives on in its effect on the mind but that is no longer a good that remains for others to enjoy (unless one chooses to provide that good/service for others, which requires incremental "productthe lecture digitized, however, it takes on areusable is nature—it becomes durable.

Here's a story about how education as a durable information good creates a completely different mind-set. Recently over lunch, an alumnus of the business school at which I am dean asked me, "What is your content strategy?" In a trade-tional world of non-durable education goods, this question would not naturally be posed. And it was one that I had never considered prior to that point. And yet, it is one that anyone in an industry involved with durable information goods would ask routinely.

For network economics, the basic idea is that "increasing returns" result when the value to one user depends on how many other users there are. There are many ways that this network effect becomes more operative as an Information good becomes more durable.<sup>3</sup> Five examples of this include following:

- Learning Analytics: generating more data on learning outcomes as a function of the learning environment. Put differently, the kinds of controlled experiments that define great science are increasingly available to the education sector. And those who establish early leads in access to data and the ability to deliver insights from it will enjoy increasing advantages.
- Peer-to-Peer Learning: supporting more opportunity for student-to-student learning. Students have always learned from one another.

  But the degree to which digital formats that run at scale can facilitate this more effectively will stem from, for example, the ability to match learners who can learn from one another effectively.
- Freemium Pricing Models: learning at higher scales makes room for pricing strategies that allow users to sample at

a price of zero. The network effects that come from consolidating le earners on a given platform will be accelerated by providing access to new users at low or zero prices. Scale is important for making these pricing strategies economically attractive.

- Alumni as Installed Base: having some customers who consider
  themselves alumni and for whom switching to another provider
  would be costly. Net- work effects become particularly strong in this s
  setting. What an "alum" means as the sector expands beyond trait tonal
  university providers will be an important element of the
  evolving picture.
- Convergence of the Education and Work Worlds: as "just in time" education for practical use becomes stronger, the durability information good creates additional opportunity for scaling. An example of this is what we see in the area of executive education were firms often want high-touch premium delivery of content to their senior executives, whereas a lower touch, more economical cascading of the same content deeper into the institution depends on a more digital

#### Technology as tools of Teaching

There are various types of technologies currently used in classrooms. Among these are:

- Computer in the classroom: Having a computer in the classroom is an asset to any teacher. With a computer in the classroom, teachers are able to demonstrate a new lesson, present new material, illustrate how to use new programs, and show new information on websites.
- Class blogs and Wikipedia: There are a variety of Web 2.0 tools that are currently being implemented in the classroom. Blogs allow for students to maintain a running dialogue, such as a journal, thoughts, ideas, and assignments that also provide for student comment and reflection. Wikipedia, an online encyclopaedia, are more group focused to allow multiple members of the group to edit a single document and create a truly collaborative and carefully edited finished product.
- Wireless classroom microphones: Noisy classrooms are a daily occurrence, and with the help of microphones, students are able to hear their teachers more clearly. Students learn better when they hear the teacher clearly.
- Mobile devices: Mobile devices such as tablet or smart phone can be used to enhance the experience in the classroom by providing the possibility for professors to get feedback.
- Interactive Whiteboards: An interactive whiteboard that provides touch control of computer applications. These enhance the experience in the classroom by showing anything that can be on a computer screen.

This not only aids in visual learning, but it is interactive so the students can draw, write, or manipulate images on the interactive whit eboard.

- Digital video-ondemand: Digital video eliminates the need for inclassroom hardware and allows teachers and students to access video clips immediately by not utilizing the public Internet.
- **Online media**: Streamed video websites can be utilized to enhance a classroom lesson.
- Online study tools: Tools that motivate studying by making studying more fun or individualized for the student.
- **Digital Games**: The field of educational games and serious games has been growing significantly over the last few years.

The digital games are being provided as tools for the classroom and have a lot of positive feedback including higher motivation for students.

There are many other tools being utilized depending on the local school board and funds available at their disposal.

### Education Technology Project in India

The Government of India in the Ministry of Education and Social Welfare realized the importance of Education Technology for Qualitative improvement of education and included the Education Technology Project in its Fifth Five Year Plan in 1971. This project had four sub-schemes as follows:

- Setting up an Education Technology Unit in the Ministry of Education and Social Welfare.
- 2. Establishing a Centre for EducationvTechnology (CET) in the N CERT.
- 3. Actioning in the following areas:
- 4. Systems designing and implementation.
- Prototype production of suitable hardware and software.
- 6. Training invdifferent areas of Education Technology.
- 7. Research and Evaluation
- Collection and dissemination of information, data and consultancy services.

The Education Technology project was conceived as a broad-based and collaborative effort among the Ministry of Education and Social Welfare, the Ministssisting States for setting up Education Technology Cells and their programmes on 100% basis.

• Strengthening a few education institutions for undertaking Education Technology Programmes. Accordingly, unit wasvstarted in the Ministry since 1971 and a CET in the NCERT was set-up during 1973.

Education Technology Cells come into being different states from 1972-73 onwards. [4] The Unit in the Ministry made all planning, policy-making and providing funds for implementation of the Educational project and the CET in the NCERT started funry of Information and Broadcasting, the Indian Space Research Organisation and other concerned organisations. It is underlined the importance of interagency co-ordination, systematic planning, scientific evaluation and effective utilization. Operationally the scheme sought to extend, the benefits of technology to large groups, particularly those in rural areas. It aimed at improving the quality of education at all

17

levels, to reducevwastagevand stagnation and to introduce new methods of teaching and innovation. [5]

Recently, Information and Communication Technology (ICT) for education, initiative by UNESCO, conducted an extensive consultation to identify the competencies that teachers should develop to use technology effectively in the classroom. It is basically an umbrella term that encompasses all communication technologies such as internet, wireless, satellite communications, digital television computer and network hardware and software; as well as the equipment and services associated with these technologies, such as videoconferen cing, e-mail and blogs etc. that provide access to information.

[6]

#### 'Divisions of learning' across humans and machines

Grappling with the implications of increasing datafication of education raises significant questions about the powerful models of human behaviour being 'learned' by machines as they surveil our everyday interactions with digital technologies. From our shopping routines toour political leanings, machines now seem capable of learning our habits and influencing our choices in unprecedented ways. Indeed, one might be forgiven for assuming that effective and unadulterated 'machine learning' is now more salient to the future prosperity of our political economy than the learning undertaken by human beings.

As the 2020s progress, we need to consider a set of difficult questions about 'learning'. For example, were is the most significant and influential in our societies? What kind of systems are happening undertaking learning? How is 'our' learning (ascitizens, students. workers) inter- mingled with the ways that machines learn? outcomes? These questions address a vision of learning that extends well beyond of formal education - highlighting the extent to which educational researchers need to expand their horizons and extend their interests. Prominent work in critical data studies over the 2010s has foregrounded the need to shift attention from divisions of labour to 'divisions of learning' as perhaps the dominant 'axial prin- ciple of social order in an information civilization' (Zuboff 2019, 179). If this is the case, then critical EdTech research needs to work to re-establish the value of formal education in an era of ubiquitous learning (by machines, from 'our' data). Above all, then, we need to challenge accepted views of what constitutes meaningful and worthwhi le knowledge for our future societies.

#### Reimaging forms of EdTech suitable for an age of climate change.

The 2020s will be the decade were we finally face up to the imperative to establish sustainability and ecological responsibility as central elements of educational provision and practice. One key aspect of this will be properly facing up to the ways in which digital technologies have been excessively con-sumed and discarded over the past 20 years in the name of education 'innovation'. Regardless of how daunting such changes might seem, the education community needs to quickly curtail

being set by the 'Computing Within Limits' movement that is growing within various areas of academic computer science (Nardi et al. 2018).

This attempts to identify and promote forms of computing that are best suited for a resource-constrained planet. The emphasis here would be on planning future education technology use with a primary aim of 'coping with finiteness'. This involves abandoning the 'cornucopian' assumptions of limitlessness and abundance that have bloated digital tech-nology use over the past 30 years. Instead, we need to

use over the past 30 years. Instead, we need to develop radically leaner and ecologically-mindful approaches torethinking how digital technologies might be best deployed (or notdeployed) in education.

#### Challenges of use of Education Technology in India

Despite early implementation of technologies in Education system, India still faces teething problem for the new technologies in education. Some of them are:

- Not enough or limited access to computer hardware & computer software in education nstitutes
- Lack of time in school schedule for projects involving use of technologies
- Lack of adequate technical support for education institutes

Not enough teacher training opportunities are here?

 Lack of knowledge about ways to integrate technologies to enhance curriculum

Education technologies integration is not a priority

Students and Teachers do not have access to the necessary technology at home

There is also a negative facet of new technologies used in education. Many ethical questions and issues arise with this use of the latest technologies in education.

- The Copy and paste syndrome— Schools and universities have more and
  more problems with students who prepare essays/ project/ presentation by using material
  from websites or blogs. Often, students just copy pieces of
  information that look relevant and paste themtogether, without sometimes
  even understanding them, let alone citing them.
- **Distortion** of reality— When students are looking for some information on the website, they usually employ a search engine. This will give them a ranked list of often incredibly many search results. There is the real danger that their view of reality is distorted by the website, by the fact that someone with enough money can influence what is written or ranked.
- Too much trust in the information found When searching for some information on the website students tend to accept what they have found as true information, often without looking at other sources

and hence having no justification to accept the information at face value.

• Loss of privacy and profiling — When students use services offered over the websites it is clear to us that they are making often information about us known to the service providers. The situation gets much more complicated if a company has a set of services so that combining all the information that potentially can be extracted gives a very detailed profile. There can be no doubt that some companies are collecting information or profiles on users, and on economic relevant developments. This may be done through stealth as described or from open social networks where many persons give away information that may well be harmful to them at some later stage.

In India, while education technologies appear to have been taken quite seriously by many state governments and by certain private sector initiatives, most of these programmes are aimed at preparing students for the job market.

In addition, the programmes are software- acentric, i.e. they emphasise the learning of a specific set of software tools. There is urgent need to demystify this technology and de-emphasise the learning of specific tools.

A balanced generic curriculum, where computers are relegated to their due place as tools, and where they extend the horizon of other subjects is a must.

To enable technology in India, computer-based learning system must be introduced from the junior level so that the students become computer savvy from very young age and are not afraid of using Education Technology when actually needed.

#### RESEARCH METHODOLOGY

#### Research Problems:

The research paper makes use of both primary and secondary research. The flow of the research is as follows:

**SEGMENT 1:** Secondary Research on Product.

**SEGMENT 2**: Primary research on Perception of Students towards the ED- Tech Sector of India.

**SEGMENT 3:** Primary research on Customer Need Analysis for a Teacher Learning application.

#### Research Design:

Primary research on Perception of Students towards the ED-Tech Sector of India.- This survey report collects data inputs from 112 participants selected randomly having both students as well as the parents. The main purpose of this research is: This research aims at examining the existing ed tech sectors and finding out the and understanding the user requirements. Primary research on Customer Need Analysis for a Teacher Learning application- This survey report collects data inputs from 105 teachers requested from various schools and institutions mainly from India. The main purpose of this research is : This research aims at finding what all feature do the teachers need in an app to aid them in day to day teaching

# SEGMENT 1: SECONDARY RESEARCH ON PRODUCT CHARACTERISTICS

In this segment the comparative analysis of the product is performed. The companies under analysis include: *Vedantu, CueMath, BYJU's, Doubtnut, Meritnation, Khan Academy, Testbook, Toppr, and EI.* 

Features	DESCRIPTION (This segment will	Vedantu	BYJUs	Cue Math	Doubtnut	Toppr	Meritnation	Khan Academy	Testbook	EI
	explain the features indetail)									
Elements and Coverings										
	Does the Ed- Tech plaform cater to the			Yes						
School Education	needs of LKG AND UKG classes?	No	1 05	(mot	no	No	Yes	Yes	No	No

	D 1 D1				1	1	<u> </u>	<u> </u>	1	
	Does the Ed- Tech plaform									
Primary and	cater to the									
secondary	needs of classes		<b>X</b> 7			<b>X</b> 7	<b>T</b> 7	<b>T</b> 7	N.T.	<b>T</b> 7
supplemental education	1st - 12th?	Yes	Yes	yes	yes	Yes	Yes	Yes	No	Yes
cadeation	Does the Ed-									
	Tech plaform									
	provide courses		* *							
Higher Education	for students after 12th?	No	Yes	no	no	No	no	Yes	No	No
	arter 12th:									3
	How many									from
	board							1/CDCE	O.1 f	India
Number of	curriculum do	~	0	_	1.0	22	20	form	Only for Entrance	2
Boards covered	they cover in their services?	5	9	5	16	22	29	India)	т-	Abro ad
	then services:					Yes		,		au
						(learni				
	Are they					ng				
	teaching any					planet)				
	subject that is					a differe				
Outside	not in the					nt				
Curriculum	school					physic				
Subjects	curriculum like coding robitics,	yes	yes	yes	no		No	Yes	Yes	Yes
	etc. ?					space				
	Are there special									
	feature where the application asks									
	question of the									
	day and gives the analysis of how									
	many people were									
	right or wrong in the form of									
	*stories* ?									Yes(
Question of the day										Mind spar
Question of the day		yes	no	no	no	No	No	No	no	k)
	Are there special									
	feature where the									
	application give									
	any unique fact of the day in the									
	form of *stories*									
East of the 1	ļ'					NT-	NI.	NI.	NI.	
Fact of the day		yes	no	no	no	No	No	No	No	no

	<del>_</del>														
Taught in different regional languages	Are there options available to select the medium of th tutoring (like any regional language)?	e				2	V		V		,		V		<b>.</b>
					1	2	Yes		Yes	Y	Zes		Yes		No
No. of Subjects	How may subjects(numbe r) does the platform teach?	15	15	2	9	ı	17		15	1	9		Exam Based		
Grades	What are the grades ior classes that the ed tech platform provides services to	1 to 1	LKG 12	to kg		5-12 , Gov.	5 to 1	12	1 to 12	ir	-12+ ncludin JG	ı g	Not availabl for grac specific	e l	l to 10 (ASS ET only 3-10)
	Are the special packages for stiudents who want tutoring for both maths and biology along with physics and chemistry in classes 11 and 12?	no	yes	no	no	V	es	Yes	3	Yes		No		Not applicabl as the offering is till	e i
	Can the user select the level of difficulty of the test as(beginner, intermediate, and hard) according to users need and choice?	no	No	no	no			No		No		No		No	
		110	110	110	110	y	<u> </u>	110		110		140		110	
School needs and Tools															
	Has the organisation partnered with school for any promotion related activirties?	NO.	Vez			<b>4</b>		Ss				NT.		V	
~ 7110013		NO	Yes	yes	no	Y	'es	No		yes	·	No		Yes	

International services	KIIIG .	No	no	yes	no	yes		Yes	No	Yes
Device Support		No	Tablet s	no	no	no	Yes (Optional)	No	No	No
Foreign Languages	Does the organisation teach in any foreign languages?	NO	No	no	no	no	Yes(Fren	No	No	No
Live Classes and Details										
	students can join and have real time interaction with the instructor?									
Live Quizzes	Does the live tutoring have specific classes for LIVE Quizzes where the convener conducst the quizz within the class?		no	yes	no	Yes	Yes	no	They do not have a liv instructor but a it has a timed test which starts and ends at a specific time	No
Jokes section	Are there refreshing joke segments within the application for short break from the studies in the form of	humou r me option		no	friends sectio n		No	no		No
Revison live classes	Does the ed tech platform offer anyspecial live classes for revision of topics or chapters?			yes	no			No		No

Quizzes option	is there a special quizz section for the subjects in the app?	yes	yes	yes	yes	Yes	No	Yes	Yes	
Class Recording Features	Can the user record the live class and access it later offline?	No	No	no	no	Yes	Yes (can request it through email)	No	Yes	No
1 on 1 Tutor for Teaching(Paid and optional)	Is there any course or feature by which student can opt for one to one tutoring(as paid and optional subscription)?		yes	yes	noi	no	No	no	No	No
Trending option	Does the ed tech platform display the trending videos that are available?	no	no	no	yes	no	Yes	No but has a surprise me option	Yes	No

	Are there									
	motivational									
	videos as a									
	supplement to									
	build up your									
	morale by									
motivational videos	boosting your									
motivational videos	confidence?									
	confidence:	no	no	no	yes	no	No	Yes	No	No
	Does the									
	application create									
	a special							Yes (can		
	personalised							be		
	playlist for you							downloa		
	to access your							ded as		
My playlist option	viewed videos?	no	no	no	yes	no	Yes		No	No
wiy playfist option	viewed videos:	110	110	110	yes	110	103	well)	110	110
Pricing and										
Details										
Pricing Strategy										
(Average Prices)										
			https://							
			drive.g							
			oogle.							
			com/fil							
			e/d/1P							
			tVbxY							
			0JQCv							
			uNLO							
			UKJR							
			hSljtL							
			w84cT							
			Hv/vie	3-						
	what is the	1049-	w?usp	3.5k						
	average product	1499(t		per						
	price for these	opicwi	ng	mont	1000					
	clases?	se)	<u>ng</u>	h	4 <del>800</del>					
1 to 3	C145C5 !	30)	Late 11	11	3600	=		Free		
			https:// drive.g							
			oogle.						1	
									1	
			com/fil						1	
			e/d/1P							
			tVbxY							
			OJQCv						1	
			uNLO						1	
			<u>UKJR</u>							
			hSljtL							
			w84cT	2						
	1	10.40	Hv/vie	3-						
	what is the	1049-	w?usp	3.5k						
	average product	1499(t	<u>=shari</u>	per		30,000				
	price for these	opicwi	<u>ng</u>	mont	<del>4800</del>	&				
4 to 7	clases?	se)		h	3600	45,000			1	
				1						

			https://	3-					
	what is the	1049-	<u>drive.g</u>	3.5k					
	average product			per		30,000			
8 to 10	price for these	opic III		mont	<del>4800</del>	&		3,716	
0 10 10	clases?	se)	<u>e/d/1P</u>	h	3600	45,000		5,710	

			tVbxY 0JQCv uNLO UKJR							
			hSljtL w84cT Hv/vie w?usp =shari ng							
11 to 12	what is the average product price for these clases?	1049- 1499 (topic- wise)	https:// drive.g oogle. com/fil e/d/1P tVbxY 0JQCv uNLO UKJR hSljtL w84cT Hv/vie w?usp =shari ng	3- 3.5k per mont h	4800 3600	30,000 & 45,000	24990- 42990		6,546	
Number of payment options available	How many different payment options can a customer choose from?	5	5	5	4	4	5	Free	5	4
Discounts and offers	does the platform offer any kind of discount for the course?	yes	Yes	yes	yes	Yes	Yes	Free	yes	
Maximum discount available (Percentage terms)	What is the maximum discount that customer can avail through various offers like, code, tests or referal?	40	Variabl e	35	Variab le	Variab le	33%	Free	33%	
prize winning quizes	Does the organisation organise quizes with prize money for students?	yes	no	no	no	No	No	No	No	
Financing Options	Are there any EMI options available?	yes	yes	yes	yes	yes	Yes	No	Yes	
Pricing for Live	WhaT IS THE PRICE for live classes?	Defaul t offerin g	differe nt packa ge	ng	4800	includ	Included	No	Included	Inclu ded (Min dspa rk)

Classes 3600 ed	
29	

	1	l	1			1		I		
Competitive										
Exams										
Preparation										
Number of competitive exams covered	How many competitive exams are covered by the ed tech platform?	5(diffe rent)	5	no	2	58	8	2	149 exams	
IIT/NEET Support	Does the ed tech platform cater to the needs of the JEE/ NEET Aspirants?	yes	yes	no	yes	Yes	Yes	yes only JEE	Yes	No
	is there any									
jee main important questions	special segment with important and probable questions for JEE	yes	no	no	yes	Yes	Yes	no	Yes	No
	Does the ed tech platform provide tutoring for the NDA enterance examination?									
NDA preparation					yes	Yes	Yes	No	Yes	No
jee main revision notes	Does the ed tech platform have the provision for self prepared notes from the subject teacher?	yes	no	no	yes	yes	Yes	No	Yes	No
CA, CS, CMA Support	Does the e learning platform provide support for CA, CS, CMA					V	N.	N.	N.	N
թարր <b></b> ու	CAUIIIS:	no	no	no	no	Yes	No	No	Yes	No
GMAT and GRE support	Does the e learning platform provide support for GREand GMAT exams?	no	yes	no	no	yes	No	yes	Yes	No
Law entrance examination	does the e learning platform give specific tutoring for law entrance					Ver	No	No	No	NT.
-Aummanon	examination?	no	no	no	no	Yes	No	No	No	No

	Does the e									
	learning platform									
	provide assistance									
	for olympiad									
olympiad	preparation?			yes	yes	Yes	Yes	No	No	no
	does the e									
	learning platform									
	give specific									
	tutoring for									
muunee	Management								yes but not	
examination	entrance examination?	<b></b>					No	No	CAT	No
upport		no	no	no	no	yes	NO	INO		110
	Are there short									
	duratrion courses									
	for fast track									
	preparation before the									
	exam(subjectwi se				75					
	or complete				days for					
	coverage)?				JEE					
Crash Course		<del>                                     </del>	1		1	Yes	No	Yes	No	Yes
Mock Tests and										
Assessment										
<b>Details</b>										
	In all, how many	<del>                                     </del>			1					
	mock tests are									
	available on the									
3 34 1	platform for free?	<b>X</b> 7		N.T	<b>X</b> 7	X 7	<b>X</b> 7	X7	<b>X</b> 7	<b>3</b> 7
Free Mock tests		Yes	yes	No	Yes	Yes	Yes	Yes	Yes	Yes
	does the platform									
	have a Statistical									
	report available									
	for the analysis									
	of the									
	performance in									
	the test and									
Test paper Analysis	understanding the weak areas?									
Report	weak areas:	yes	yes	yes	yes	Yes	Yes	No	Yes	Yes
	Is the test				1		1			
	difficulty level									i
	difficulty level automatically set									
	difficulty level automatically set according to									
	difficulty level automatically set according to previous									
	difficulty level automatically set according to previous performance level									
'est Paper	difficulty level automatically set according to previous									
'est Paper	difficulty level automatically set according to previous performance level of the user?	no	No	yes	no	yes	No	No	No	No
Cest Paper Customisation	difficulty level automatically set according to previous performance level of the user?		No	yes	no	yes	No	No	No	No
Cest Paper Customisation	difficulty level automatically set according to previous performance level of the user?		No	yes	no yes(da	yes	No	No	No	No
Cest Paper Customisation	difficulty level automatically set according to previous performance level of the user?  Is there a special feature where daily short		No	yes		yes	No	No	No	No
Cest Paper Customisation	difficulty level automatically set according to previous performance level of the user?  Is there a special feature where daily short quizzes a re		No	yes	yes(da	yes No	No No	No No	No No	No No

	revision and									
	practice?									
Board question papers	Are there practice sets and mocks from previous year board questions?	yes	Yes	no	yes	Yes	Yes	No	No	No
Course progress Journey		no	YES	no	no	No	no	no	No	No
Certificates, Courses and Details										
Option to buy smaller modules	Are there courses which are limited to only specific topics or chapter?	yes	no	on the basis of tenur e	No	No	No	Free	No	
Certificates for courses	Does the e learning platform provide for certificates for the courses registered?	yes	yes	yes	No	No	No	Yes	No	Yes( Mind spar k)
Outcome mandatory - Completion of courses	Does the course needs to be completed	yes	yes	yes	No	No	No	Yes	no	Yes( All)
Solution Support										

Door the a			
Does the e			
learning			
platform has			
readilyavailable			
solutions for			
Icse Book books			
Solutions prescribed in		<b>3.</b> 7	2.7
ICSE board?	No	No	No
Does the e			
learning			
platform has			
NCERT book readilyavailable			
Solutions solutions for yes yes no yes Yes Yes	No	No	No
books			
prescribed in			
NCERT board?			
Doubt Support			
Are there pre			
recorded videos			
Pre Recorded with the solution			
doubts solution of the students' yes yes no no Yes No	No	No	No
videos doubt?	110	1,0	1,0
Are there options			
of having on			
screen content with AI voice			
over to increase			
Instructor Voice attraction?			
over no no yes yes No No	No	No	no
Does the app			
allow the user to			
chat with the			
instructor on			
Whats App shot			
WhatsApp chat clear the doubts? no no no Yes yes Yes	20	No	No
	no	110	INO
is a 24*7 doubt			
clearing support available to ask			
the doubts in odd			
24x7 Doubts   hours?   pro lite no   yes   yes   Yes   Yes	No	No	No
support			
Can the user			
interact with the large tutor directly to			
Doubts ask the doubts?			
pro no yes no No No	No	No	No
does the app			
Doubt Solving by solves doubts			
picture through picture? pro yes yes yes Yes Yes	no	Yes	No

Doubt Solving by	does the app solves doubts									Yes( Mins
typing	through typing?	pro	yes	yes	yes	Yes	Yes	Yes	Yes	park)
Doublt Solving -	does the app solves doubts automatically?	<b>n</b> ro	TVOS	no	TVOS	Yes	Yes	Yes	No	No
Doubt Solving -	Does the app solve the app manually?	pro pro	yes yes	no yes	yes	Yes	Yes	No	Yes(Peer s)	Yes( Mins park)
Activities Details		pro	y es	yes	y es	105		110		,
Built in Games and	Are there any build in games to foster learning(single/multiplayer)?	yes	yes	yes	yes	Yes	Yes	no	No	No
	Does the e learning platform organise online activities like webinars, competition et									
Online Activities	_	yes	yes	yes	yes	Yes	Yes	Yes	No	No
App Details										
	Does this ed tech platform has a mobile app for students?									
Mobile App for Students		Yes	Yes	Yes	yes	Yes	Yes	Yes	Yes	No
Mobile App for	Does the platform has a special app for teacher for registration as a teacher with the organisation?									
Teacher		Yes	No	Yes	no	No	No	Yes	No	No
Mobile App for	Does it have a special app designed for parents?						N.	N		N.Y
T un onto	How many people have downloaded		yes		no	yes	Yes	No	No	No
terms of app	the app till 29 September?	10 M+	50 M+	100k +	10 M+	10M+	5M+	10M+	5M	NA
	What is the rating that the users have given on Play store or									
Google play store rating	Appstore?	4.2	4.4	4.4	4.1	4	3.9	4.4	4.4	NA

### **SEGMENT 2: EMPIRICAL ANALYSIS AND RESULTS (PART 1)**

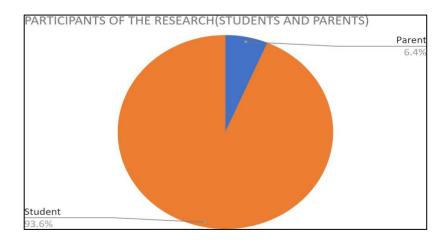
The results are presented in the form of two separate primary researches. The first research was conducted on the customer perception of the student learning applications. The second research was conducted on Teacher learning app need analysis. The result of the researches are presented separately as follows:

#### 1. CUSTOMER PERCEPTION OF ED TECH PLATFORMS:

This survey report collects data inputs from 112 participants selected randomly having both students as well as the parents.

The main purpose of this research is:

This research aims at examining the existing ed tech sectors and finding out the and understand the user requirements.



#### PARTICIPANTS BACKGROUND:

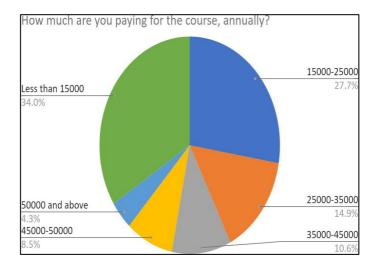
Most of the participants were a part of BYJUS and Toppr.

COMPANY	FREQUENCY
BYJUS	64
TOPPER	24
VEDANTU	2
MERITNATION	2
KHAN ACADEMY	2

#### ANNUAL FEE PAYMENT:

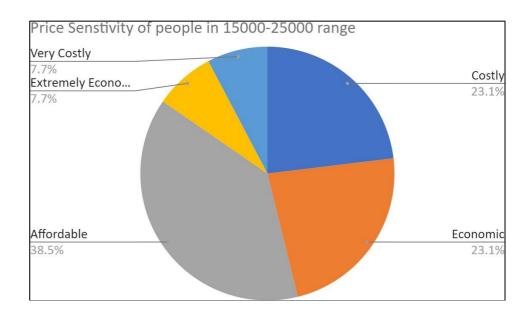
61.7 % the participants have chosen a package where they are paying less 25000 annually.

This tells about the willingness to pay for a study package for a year.



#### PRICE SENSITIVITY OF USERS IN 15000-25000 RANGE

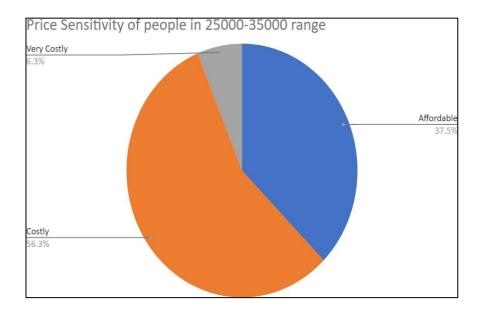
69.3% of the participants are comfortable in a lower price range(15000- 25000) But, 30.6 percent are no comfortable in this range also.



## PRICE SENSITIVITY OF USERS IN 15000-25000 RANGE

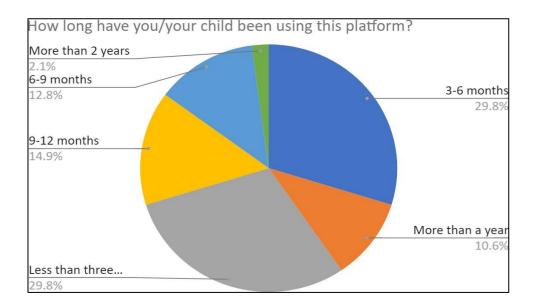
69.3% of the participants are comfortable in a lower price range(15000- 25000) But, 62.6% percent are no comfortable in this range. On comparing it with the previous range(15000-25000),

It shows that customers are highly price sensitive as price increases over 25000.



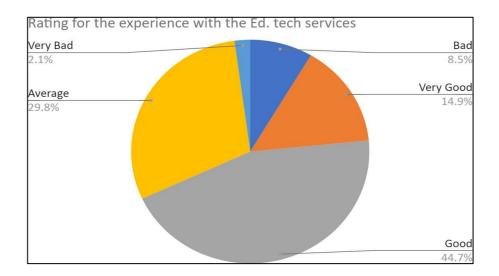
## TERM OF USAGE

72.4% of the participants started using the platform between January 2020 and September 2020 during the pandemic induced lock down.



### RATING FOR EXPERIENCE

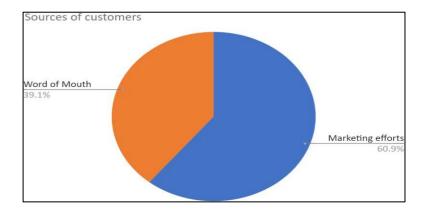
40.4 percent of the users do not rate the experience to be good. There is a scope of improvement to fill in the gap.



#### **SOURCES OF CUSTOMERS:**

More than 60 percent of the users get attracted through Marketing efforts. This shows how advertisement and promotions increase the business more in case of Ed-Tech sector as compared to the word of mouth methods.

The budget allocation should be made with major focus on the Marketing costs.

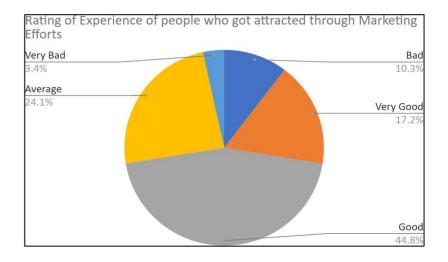


# RATING OF EXPERIENCE BY PEOPLE WHO GOT ATTRACTED THROUGH MARKETING EFFORTS

37.8% OF THE USERS that get attracted through the Marketing efforts do not rate the experience to be good.

This means that the promotions and advertisement promised more than delivery.

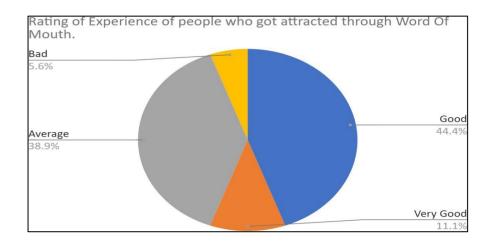
There has to be an upgrade in the product quality and delivery.



# RATING OF EXPERIENCE BY PEOPLE WHO GOT ATTRACTED THROUGH WORD OF MOUTH

44.5% of the users that get attracted through the word of mouth do not rate the experience to be good.

This means that they were not able to find the product as useful as it was for their peers. There has to be a personalised stategy to increase their experience with the product.

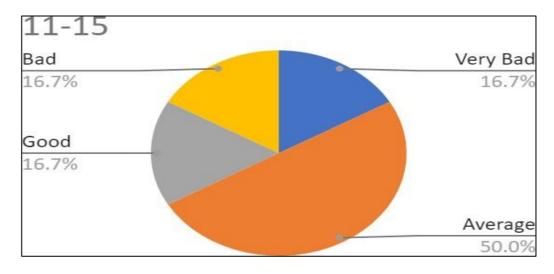


#### **SATISFACTION ANALYSIS:**

The satisfaction analysis is done in two parts. The first part measures the level of satisfaction of students in the age group of 11-15 and the second part focuses on 16-19 years.

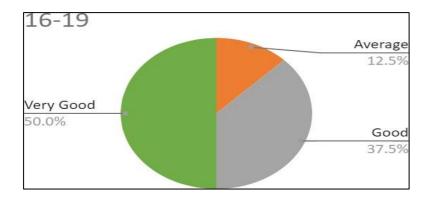
#### a. <u>11-15</u> <u>age group</u>

83.3% of the users in the age group of 11 to 15 do not rate their experience to be good. But the results are observed in the higher age groups.



## b. <u>16-19</u> age group

Here, 87.5% have a good experience with the product and rate it good or very good. On comparing it with the last graph, it means that the product features cater to the needs of and satisfy the higher age group students more.



#### PRICE AND AFFORDABILITY

The price and affordability analysis is done in two parts. The first part measures the price and affordability of students in the age group of 11-15 and the second part focuses on 16-19 years.

## a. <u>11-15</u>

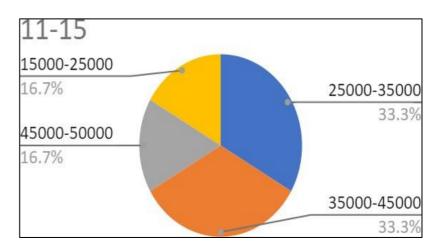
66.66% of the users pay more than 25000.

Comparing it with the 83.3% of the users in the age group of 11 to 15 do not rate their experience to be good,

It tells that the majority of the users are paying high and still satisfied in this age group. Focus should be on:

Lesser price range

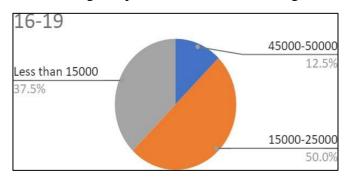
Higher level of satisfaction.



b. 16-19

87.5% of the population pay less than 25000 and show high rating of experience (87.5% have a good experience with the product and rate it good or very good)

The price has a huge impact on the over all rating.

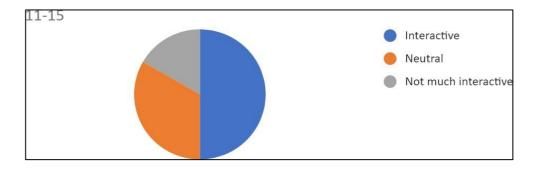


#### LEVEL OF INTERACTION

The level of interaction analysis is done in two parts. The first part measures the level of interaction of students in the age group of 11-15 and the second part focuses on 16-19 years.

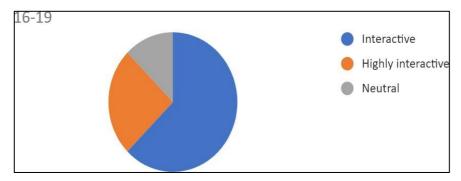
#### a. <u>11-15</u>

50 percent of the users in the age of 11-15 do not find the product attractive. This is a huge percentage in spite of the degree of animation done by BYJUS.



b. <u>16-19</u>

As opposed to the previously mentioned age groups, in the age group 16-19, users find the product to be interactive(75%).

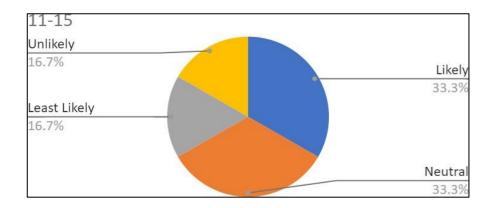


#### LIKELIHOOD TO RECOMMEND

The likelihood to recommend analysis is done in two parts. The first part measures the likelihood to recommend of students in the age group of 11-15 and the second part focusses on 16-19 years.

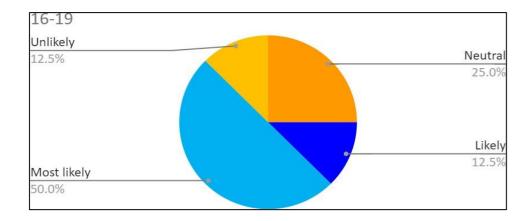
#### a. <u>11-15</u>

66.66% of the users are not likely to recommend the product. This means that there will be less (33.33%) WOM form of information about the product.



### b. <u>16-19</u>

62.5% of the users are likely to recommend the product. This means that there will be greater number of customers through WOM form of information about the product.

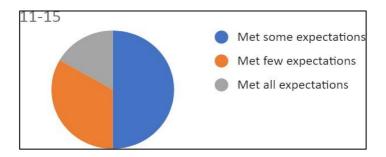


#### **CURRICULUM**

The curriculum perception analysis is done in two parts. The first part measures the curriculum perception of students in the age group of 11-15 and the second part focuses on 16-19 years.

## a. <u>11-15</u>

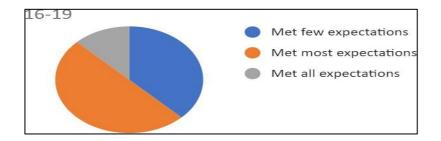
70 percent of the users do not find the course curriculum up to the mark in the 11-15 age group.



### b. 16-19

75 percent of the students in the age group of 16-19 do not find the course curriculum to be satisfactory.

Similar results are observed in all age groups.



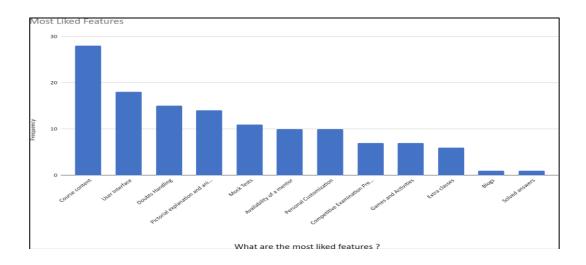
### PERCEPTION TOWARDS FEATURES:

This segment covers the three important aspects:

- 1. Most likedfeatures
- 2. Least likedfeatures
- 3. Features that can enhance the learning

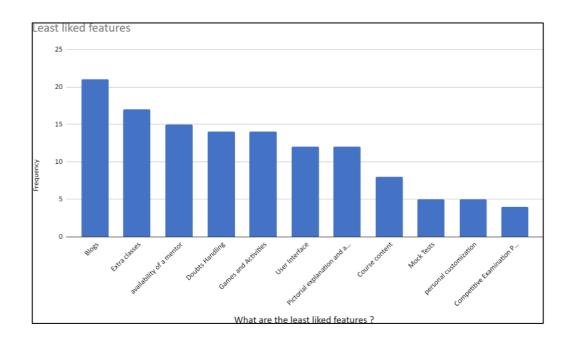
### 1. Most liked features:

According to the statistics here, The most liked features of the platform are Course Content, User Interface, Doubts handling and etc, Respectively. showing that the platform has more inclination towards the content.



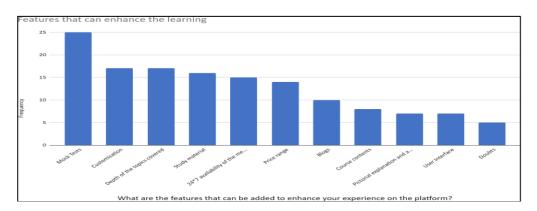
## 2. <u>Least liked features</u>

According to the statistics here, The most liked features of the platform are Course Content, User Interface, Doubts handling and etc, Respectively. showing that the platform has more inclination towards the content.



## 3. Features that can enhance the learning

The most chosen options for the features that can enhance the learning are Mock Tests, a clash between Customisation and Depth of topics covered, etc, respectively.



# INTERRELATIONSHIP BETWEEN ED TECH VARIABLES: REGRESSION MODEL

This segment focuses on analysing the relationship between the five most important parameters:

- 1. Pricing
- 2. Teaching Methodology
- 3. Interactiveness
- 4. Recommendations
- 5. Curriculum

On performing the correlation model the r values are as follows:

# CORRELATION ANALYSIS

	_	Teaching Methodology	Course Curriculum	Recommendation	Interactiveness
Pricing	1				
Teaching Methodology	0.4663	1			
Course Curriculum	0.1966	0.1858	1		
Recommendation	0.9673	0.3984	0.5762	1	
Interactiveness	0.5516	0.5036	0.7664	0.9477	1

# ANOVA

Source of Variation	SS	df	MS	F	P-value
Between Groups	12.4	4	3.1	2.504559043	0.04305707
Within Groups	284.680	230	1.237742831		
Total	297.080	234			

#### **ANALYSIS:**

- 1. There is a high positive relationship between the pricing and recommendation. This means if the prices are satisfying, there are higher chances of recommending it to peers in the ed tech sector.
- 2. There is a high positive correlation between curriculum and interactiveness. This means if the course curriculum is good, the level of interactiveness will enhance.

- 3. There is a high positive correlation between the interactiveness and recommendation. If the interactiveness is high, students would recommend the services to their peer.
- 4. There is average positive relationshipbetween:
- price and interactiveness.
- Interactiveness and teaching methodology
- Curriculum and Recommendations.

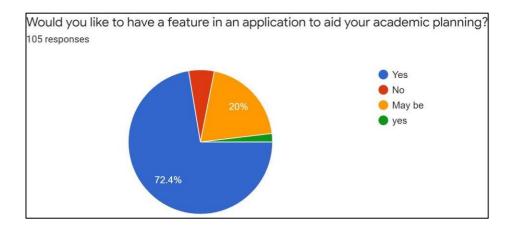
## **SEGMENT 3: EMPIRICAL ANALYSIS AND RESULTS (PART 3)**

This segment makes use of primary research for analysing the customer needs for an application where teachers can learn and work in such a manner that their work becomes easier. This survey report collects data inputs from 105 teachers requested from various schools and institutions mainly from India. The main purpose of this research is: This research aims at finding what all feature do the teachers

Need in an app to aid them in day to day teaching

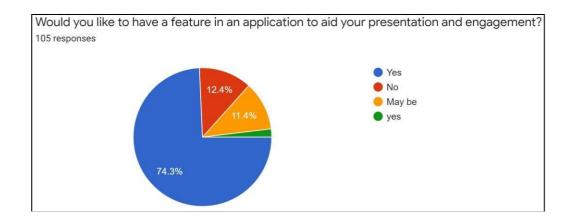
# Would you like to have a feature in an application to aid your academic planning?

According to the chart shown, the majority of the responses around 72.4% had the teachers responding with a "Yes", which concludes that a lot of teachers feel burdened due to the new model and don't get a lot of time so aid for their academic planning would help a lot. There are teachers 20% who are not sure as well.



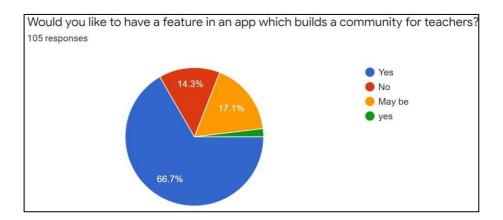
# Would you like to have a feature in an application to aid your presentation and engagement?

There is a majority that the teachers would wish to have a feature that helps to aid their presentation and engagement, which are a total of 74.3%. This shows that due to all presentations being online, teachers feel the need of a tool to help them make engaging presentations easily. There are also 12.4% of teachers who feel there is no necessity for anything as such. But, there are another 11.4% teachers who still aren't sure about anything.



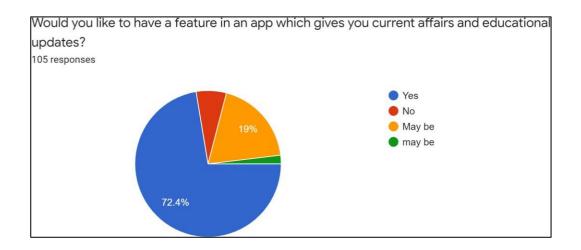
# Would you like to have a feature in an app which builds a community for teachers?

According to the chart, there is a majority of 66.7% where the teachers have voted for a "Yes", and therefore want such a feature. Shows that a lot teachers want to connect with their counterparts for discussions and mutual growth. Whereas 14.3% of the teachers still do not want the need for it.and 17.1% of the teachers are still unsure about anything.



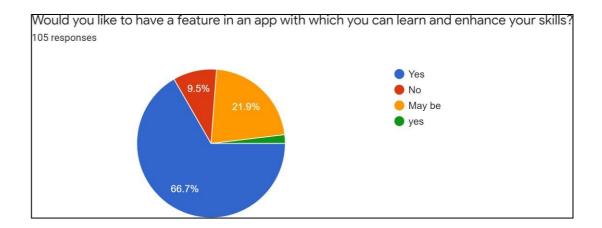
# Would you like to have a feature in an app which gives you current affairs and educational updates?

Here, the majority of 72.4% of the teachers feel the need for such a feature. This means that the teaches are interested in getting all their daily updates and being connected to the happenings around the globe at one place. Whereas a clear 19% of the teachers are not sure, therefore, there is a need is what the teachers feel.



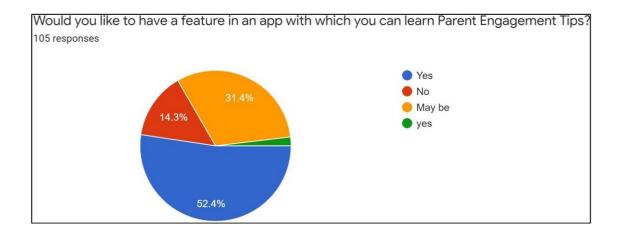
# Would you like to have a feature in an app with which you can learn and enhance your skills?

According to the chart here, There is clear majority as the teachers approve of such a feature around 66.7% of them. Then there are 21.9% who are unsure and 9.5% of the teachers do not feel any requirement, to help enhance thier skills. In these competitive times, even teachers look for opportunities to better themselves.



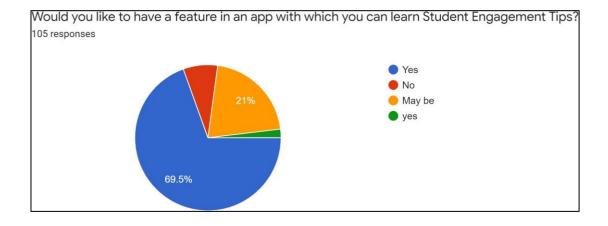
# Would you like to have a feature in an app with which you can learn Parent Engagement Tips?

According to the chart, there is a majority of a "Yes" even though the statistics show a 52.4% Whereas the teachers who say "No" are only 14.3% And as 31.4% are not really sure about the feature, it is a neutral decision. While majority of the participants are interested in this feature, there is a significant amount of teachers who are not very sure.



# Would you like to have a feature in an app with which you can learn Student Engagement Tips?

As per the pie chart, there a majority of the teachers responding with a "Yes" totaling to a 69.5% And "Maybe up to 21% While 9.5% said no. This shows that a considerable number of teachers want to learn how to keep the students interested, especially in online classes.

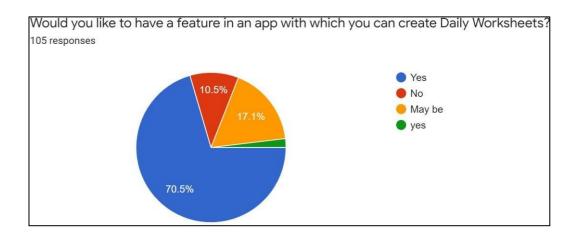


# Would you like to have a feature in an app with which you can create Daily Worksheets?

According to the pie chart, there is a majority of the "Yes" response to a 70.5%, A least minority of 10.5% And another doubted response of 17.1%, resolving at "Maybe". A feature to create worksheets would actually help a Good percentage of teachers as they

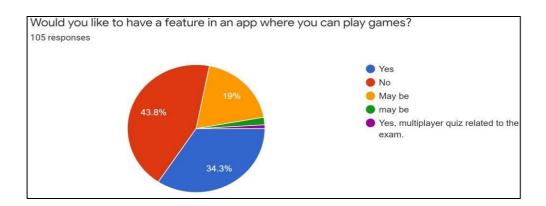
would not		
	53	

have to work very hard on regular testing of students.



# Would you like to have a feature in an app where you can play games?

In this pie chart, there is a clear majority of the teachers responding with a "No"., 34.3% said yes and a neutral view at 19%. Therefore, majority of the teachers prefer the App to be subject oriented rather than something for relaxation.



#### **SUGGESTIONS:**

The education technology marketplace is a complex one, and many entrepreneurs and developers are asking themselves what practices and design principles will make for a quality product that users love and has real impact. Entrepreneurs and developers, consider these suggestions from some of the best products and programs out there:

- Open up the design and implementation process. Products and programs effectively address a real user need when many different stakeholders have input into design and implementation.
- Remember that users must understand and feel comfortable with privacy policies. Privacy is an important topic in a technology rich world, and especially in education technology. Policies for user privacy protection should be clear, detailed, and user-friendly.
- Ensure there is an effective way to gather user feedback, and use that feedback to drive iterative design.
- The best education technology companies address specific user identified needs, consider user feedback essential, and prioritize customer service to attend to reported problems.
- Manage, repackage and deliver data to educators and administrators in a manner that is understandable and actionable. Data that is nebulous and overwhelming detracts from its helpfulness in the classroom, yet data that tracks student performance or gaps in understanding can be helpful when shared in a way that educators can use, without confusion or excessive time.
- Last but certainly not least, integrate relevant academic research into the development and revision of a product or initiative.

#### **CONCLUSION:**

According to the statistics, here is a clear view that the 105 teachers who responded, need an App that helps them in their day to day as well and yearly academic planning, and helps them create worksheets and presentations as well as gives them current affairs and educational updates while connecting them to a community of teachers.

They are also interested in learning student engagement tips while not as interested in parent engagement tips. We get to know that the teachers who have responded, are ready to gain knowledge and improve thier skills, and are keen to use the app which shall provide them these features as long as it is professional and work-oriented.

As in the last question, it has been seen that most of the teachers do not need a games feature in the app, as they want it mainly for educational and work purposes.

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#### ANNEXTURE:

- a. Email Address
- b. What should we call you?
- c. Phone Number
- d. Are you a parent or a student?
- e. Name of the Learning Platform that you/ your child use regularly.
- f. How did you come to know about this platform?
- g. Overall, How would you rate your experience with the Platform
- h. How long have you/you child been using this platform?
- i. How much are you paying for the course, annually?
- j. Which of the following features do you/you child find most useful about the platform? Name 3.
- **k.** Which of the following features do you/you child find least useful about the platform? Name 3.
- Name 3 features that can be added to enhance your experience on the platform.
- m. How likely are you to recommend the EdTech platform to others?
- n. The level of Interaction
- o. The Pricing
- p. The teaching methodology
- q. The Course Curriculum
- r. Concluding Remarks, If any.
- s. How old are you?
- t. Mention the time in which you used the platform.
- u. Are you
- v. Please enter the start date of your usage
- w. Please enter the end date of your usage
- x. Mention the time in which you used the platform.
- y. Mention the time in which you used the platform.